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Supplemental Material

Neurotoxicity of the Parkinson's Disease-Associated Pesticide Ziram Is Synuclein-Dependent in Zebrafish Embryos

Aaron Lulla, Lisa Barnhill, Gal Bitan, Magdalena I. Ivanova, Binh Nguyen, Kelley O'Donnell, Mark C. Stahl, Chase Yamashiro, Frank-Gerrit Klärner, Thomas Schrader, Alvaro Sagasti, and Jeff M. Bronstein

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Figure S1: ZF γ 1 antibody is specific for ZF. Using denaturing conditions/SDS PAGE, a band for γ 1 was detected at 17 kDa for ZF adult brain (ZF) and purified ZF γ 1 (a). No ZF γ 1 signal was detected for mouse brain (MB). Using non-denaturing conditions/Native PAGE, a major band for ZF γ 1 was detected at 480 kDa and a minor band at 242 kDa (b). Peptide preincubated with the ZF γ 1 antibody is shown for SDS PAGE. No band for ZF γ 1 was detected after preincubation of γ 1 antibody with γ 1 peptide (c). ZF γ 1 MO reduced protein levels of ZF γ 1 as compared to scramble MO as determined by SDS PAGE (d).

Figure S2: Ziram is toxic in a concentration-dependent manner and causes notochord distortion. A significant change in toxicity was observed for embryos treated (24hpf) with 100nM and 1 μ M ziram by day 7 (n = 50, p<.0001) (a). ZF embryos treated with 50 nM ziram at 5 hpf, were found to have a shorter body axis, pericardial edema, and notochord distortion (b) as compared to vehicle treated ZF (c). p<.0001 Log-Rank test.

Figure S3: Ziram treatment results in reduction of TH-1 levels. Using Western blot analysis, the effect of ziram (50nM) on TH-1 levels was investigated. A 63% reduction in TH-1 was observed for embryos treated with 50nM ziram vs. controls (n=4; *p-value = .03 using two-tailed T test). Bars represent standard error of the mean.

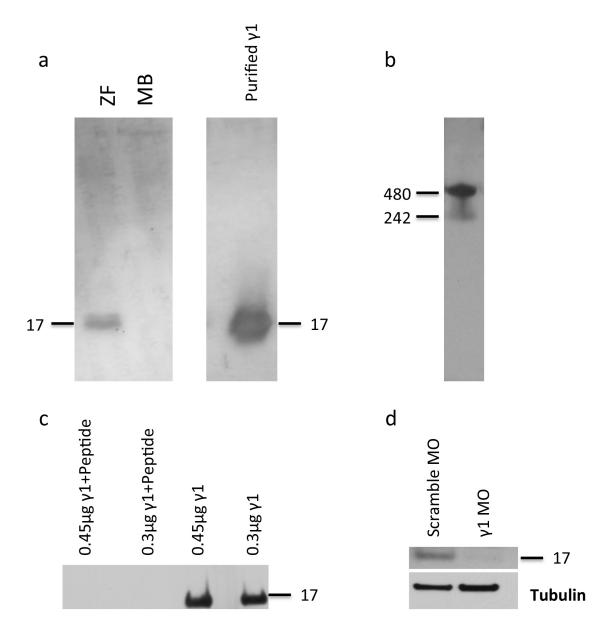


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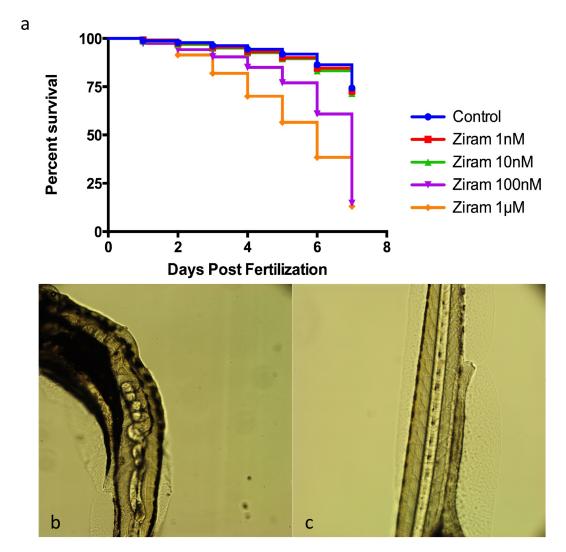


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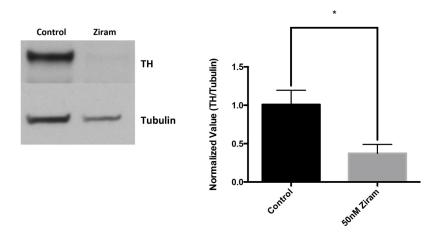


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